Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of identifying the type of discharge lamp, ~~characterized in that it comprises the steps of~~the method comprising acts of:

applying ~~an~~ a periodic amplitude-modulated control current to a discharge lamp,

detecting ~~the peak~~ a highest value of the lamp voltage ~~at~~ during a rising edge of ~~the~~ an envelope of the modulated control current, and

comparing the detected ~~peak~~ highest value with previously recorded ~~peak~~ highest values for different lamp types, and assigning the detected ~~peak~~ highest value to a lamp type on the basis of said comparison.

2. (Currently amended) A device for identifying the type of discharge lamp, said device comprising:

means for supplying a periodically changing control current to a discharge lamp,

means for modulating the periodically changing control current to the lamp,

peak detection means for detecting ~~the peak~~ a highest voltage across the lamp ~~at~~

during a rising edge of ~~the~~ an envelope of the modulated periodically changing control current,

recording means for recording ~~peak~~ highest voltages associated with lamp types and

means for comparing the measured ~~peak~~ highest voltage with the recorded ~~peak~~ highest voltages and supplying a lamp type-indicating signal on the basis of said comparison.

3. (Currently amended) ~~A~~ The device as claimed in claim 2, wherein the means for supplying ~~a~~ the periodically changing control current to the lamp are formed by a source of a comparatively high-frequency periodically changing square-wave voltage supplying, via a series-resonance chain, a corresponding periodically changing control current to the lamp, ~~characterized in that~~wherein means are present for square-wave frequency modulating said comparatively high-frequency periodically changing square-wave voltage.

4. (Currently amended) ~~A~~ The device as claimed in claim 2, wherein the means for supplying ~~a~~ the periodically changing control current to the lamp are formed by a source of a comparatively high-frequency square-wave voltage supplying, via a series-resistance chain, a corresponding control current to the lamp, ~~characterized in that~~wherein means are present for square-wave pulse width modulating said comparatively high-frequency periodically changing square-wave voltage.

5. (Currently amended) ~~A~~ The device as claimed in claim 2, wherein the means for supplying ~~a~~ the periodically changing control current to the lamp are formed by a source of a comparatively high-frequency square-wave voltage supplying, via a series-resonance chain, a corresponding control current to the lamp, and wherein said source of a comparatively high-frequency square-wave voltage is fed with a direct voltage from an AC/DC converter, ~~characterized in that~~wherein means are present for square-wave ~~amplitude~~-modulating the direct voltage supplied to said source of a comparatively high-frequency periodically changing square-wave voltage.

6. (New) A method of identifying a type of discharge lamp, the method comprising acts of:

square-wave modulating a DC voltage to produce a square-wave modulating voltage,

producing a periodically changing control current from the square-wave modulating voltage,

applying the periodically changing control current to a discharge lamp,

detecting a highest value of a lamp voltage at a rising edge of an envelope of the periodically changing control current, and

comparing the detected highest value with previously recorded highest values for different lamp types, and assigning the detected highest value to a lamp type on the basis of said comparison.

7. (New) The method of claim 6, wherein the act of producing the periodically changing control current comprises an act of producing a periodically changing control current formed as a step-like current decrease that precedes a step-like current increase.

8. (New) The method of claim 1, wherein the act of applying the periodic amplitude-modulated control current comprises an act of applying a periodic amplitude-modulated control current formed as a step-like current decrease that precedes a step-like current increase.

9. (New) The device of claim 2, wherein the means for supplying the periodically changing control current comprises a means for supplying the periodically changing control current formed as a step-like current decrease that precedes a step-like current increase.